

## REMARKS

Claims 23-27 have been added without introducing new matter.

### Claim Rejections - 35 U.S.C. §103

Claims 1-3 and 5-7 are rejected as being allegedly unpatentable over Lane, U.S. Patent No. 5,377,051 (hereinafter Lane) in view of Official Notice. Applicants respectfully traverse in view of the following.

Independent Claim 1 recites a limitation whereby a signal indicating selection of a single frame of an original playback is received, as claimed. Accordingly, one frame is selected for playback. Independent Claim 1 further recites a limitation whereby a frame, preceding a currently displayed frame of an original playback, is reconstructed from the currently displayed frame, as claimed. Accordingly, any frame preceding the currently displayed frame may be reconstructed in real time using the currently displayed frame.

In contrast, Lane discloses that playback during reverse or fast forward is referred to as trick play (see Lane, col. 2, lines 40-42). Moreover, Lane discloses that inter-frame coded data, in addition to a limited amount of intra-frame coded data is used to produce images during trick play (see Lane, col. 28, lines 45-48). Lane further discloses that the receiver obtains the video tape recorder (VTR) handshaking signal, notifying the receiver that the VTR is operating in trick play (see Lane, col. 32, lines 49-54).

According to Lane, trick play is playback during reverse or fast forward. As such, trick play is an uninterrupted play collection of frames in reverse or fast forward. Therefore, the handshaking signal is a notification of an uninterrupted play collection of frames in reverse. As such, Lane fails to explicitly teach or suggest receiving a signal indicating selection of a single frame of an original playback, as claimed.

Moreover, Lane discloses that if there is enough trick play space available, it is possible to store enough data to produce a low resolution I-frame and a low resolution P-frame during trick play (see Lane, col. 29, lines 6-9). Lane further discloses that if the trick play is limited, fewer frames would be stored, or alternatively a section of the frame is stored, or every Nth I-frame is stored and the process is repeated for storing I-frames for several frame display times to create a recognizable picture with jerky motion (see Lane, col. 29, lines 11-25). The VTR recording circuit supports the recording of trick play data (see Lane, col. 37, lines 56-58), wherein the output data from the data filter may include duplicates of data packets sent to the normal play data processing circuit (see Lane, col. 50, lines 66-68).

Accordingly, Lane teaches recording a trick play data on a medium (e.g., video tape) that can be used in trick play mode. Therefore, during the trick play, the head will trace over the trick play mode portion that corresponds to a fraction of the amount of data read during normal play (see Lane, col. 38, lines 8-15 and 27-30). As such, Lane fails to teach or suggest reconstructing a frame preceding

a currently displayed frame from the currently displayed frame, as claimed because Lane relies on the recorded trick play on the medium to playback in reverse or fast forward. Moreover, Lane teaches away because the head reads an already recorded data which differs from reconstructing a frame, as claimed.

As discussed above, Lane discloses storing low resolution frames, or fewer frames due to space limitations. As a result, low resolution trick play is produced. As such, Lane fails to teach or suggest reconstructing the frame preceding the currently displayed frame, as claimed, because a low resolution of trick play frame differs from a reconstructed frame without a loss in resolution.

Moreover, storing fewer frames in trick play results in fewer frames being read when the head traces over the trick play mode. Accordingly, in Lane only the frames that are stored in trick play are read. Consequently, Lane fails to read a frame preceding the current frame that may be missing as a result of storing fewer frames. As such, Lane fails to teach or suggest reconstructing a frame preceding a currently displayed frame, as claimed which may be any frame.

The rejection admits that Lane fails to disclose the features of performing reverse playback in a DVD system. In order to cure this defect, the rejection takes Official Notice. The Applicants respectfully disagree in view of the following.

The Applicants understand the two technologies to be inherently different. For example, as discussed above Lane records fewer frames or low resolution frames in a trick play portion of a medium (e.g., video tape). In comparison, the embodiments of the present application do not rely on a recorded trick play but rather reconstruct a single frame, preceding a currently displayed frame, from the currently displayed frame, as claimed, in real time and on the fly. Accordingly, one skilled in the art would not be motivated to use the teachings of Lane in conjunction with a DVD type medium in the claimed manner because: 1) Lane requires recording the trick play on a medium to perform a trick play; whereas 2) in using a DVD type medium the need to record trick play is eliminated since a single frame preceding a currently displayed frame can be reconstructed, as claimed, in real time and on the fly.

Accordingly, Lane alone or in combination with the Official Notice fails to render independent Claim 1 obvious, under 35 U.S.C. §103. Independent Claims 5, 15 and 19 recite limitations similar to that of independent Claim 1 discussed above and are patentable for similar reasons. Dependent claims are patentable by virtue of their dependency. As such, allowance of Claims 1-3, 5-7, 15-17, 19-21, 23-24 and 26-27 is earnestly solicited.

As per Claims 2, 6, 10, 16 and 20, Lane discloses recognizable images during trick play operation where the trick play segments are of a limited size (see Lane, col. 19, lines 39-43). Therefore video data are prioritized and sorted for recording in trick play (see Lane, col. 19, lines 43-57). Moreover, Lane

discloses that a packet error may be indicated by inserting it into the transport data stream to output a single transport data including error detected signals (see Lane, col. 33, lines 40-44). Accordingly, Lane fails to teach or suggest determining whether another selection of the single frame reverse function has occurred, as claimed. As such, allowance of Claims 2, 6, 10, 16 and 20 is earnestly solicited.

Claims 3, 7, 11, 17 and 21 are patentable over Lane in view of the Official Notice for rationale similar to that of Claims 1 and 2. As such, allowance of Claims 3, 7, 11, 17 and 21 is earnestly solicited.

Claims 4 and 8-14 are rejected as being allegedly unpatentable over Lane in view of Official Notice and further in view of Goodwin, U.S. Patent No. 6,532,232 (hereinafter Goodwin). Applicants respectfully traverse.

Independent Claim 9 recites limitations similar to that of independent Claim 1 as discussed above and is patentable over Lane in view of Official Notice for similar reasons. Independent Claim 9 further recites a plurality of frame buffers for storing frame data during the reconstructing, as claimed.

The rejection relies on Lane to show a frame buffer for storing frame data during the reconstructing. The Applicants respectfully maintain the previously presented argument in the response mailed on July 13, 2006, which has not been addressed by the present rejection. Lane discloses a frame buffer that

stores data for displaying at the location on the screen (see Lane, col. 39, lines 16-21) and not for storing frame data during the reconstructing, as claimed.

The rejection relies on Goodwin to show a plurality of frame buffers, as claimed. The Applicants, however, do not understand Goodwin to remedy the failures of the combination of Lane and Official Notice as discussed above. Accordingly, the combination of Lane, Goodwin and the Official Notice does not render independent Claim 9 obvious, under 35 U.S.C. §103, because Goodwin is directed to the number of buffers used as discussed in more detail below. Dependent Claims 10-14 and 25 are patentable by virtue of their dependency. As such, allowance of Claims 9-14 and 25 is earnestly solicited.

As per Claims 4, 8, 12, 18 and 22, the rejection relies on Goodwin. The Applicants respectfully traverse. The detailed description of the present invention recites that DVD player system prescribes that I-frames occur no less frequently than every 12 frames (see page 7, lines 2-3), thereby using at least 7 frame buffers to support the reconstruction (see page 7, lines 9-10). In contrast, Goodwin discloses that a preferred embodiment uses ten buffers to store ten frames of digital video data (see Goodwin, col. 8, lines 25-27). Accordingly, one skilled in the art would not be motivated to combine Goodwin with Lane because the preferred embodiment of Goodwin explicitly teaches away from using seven frame buffers, as claimed. As such, allowance of Claims 4, 8, 12, 18 and 22 is earnestly solicited.

As per Claims 13 and 14, the rejection relies on Goodwin. Goodwin discloses that the A/V device may be any suitable consumer electronic devices such as digital camcorders, digital cameras, HD TVs, DVD players, DVD-ROM drives, CD players, CD-ROM drives, etc. (see Goodwin, col. 6, lines 48-52). However, Goodwin fails to explicitly teach a personal computer PC-based DVD player and a game console-based DVD player, as claimed respectively in Claims 13 and 14. As such, allowance of Claims 13 and 14 is earnestly solicited.

For similar rationale, the Applicants respectfully submit that the limitations of newly added Claims 23-27 are neither taught nor suggested by the cited combination. As such, allowance of Claims 23-27 is earnestly solicited.

For the above reasons, the Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. §103.

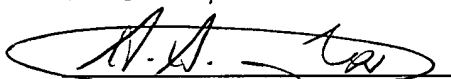
### CONCLUSION

In light of the above listed remarks, reconsideration of the rejected Claims is requested. Based on the arguments presented above, it is respectfully submitted that Claims 1-27 overcome the rejections of record and, therefore, allowance of Claims 1-27 is earnestly solicited.

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Dated: Jan 3, 2007

Respectfully submitted,  
WAGNER, MURABITO & HAO LLP

A handwritten signature in black ink, appearing to read "A.A. Tabarrok", is written over a horizontal line.

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